

and PRODUCTION HANDBOOK

TYPE CATALOG **VARIGRAPH** and PRODUCTION HANDBOOK

66U (14-72)
66L (14-72)

SIMILAR TO
LYDIAN CURSIVE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
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69U (14-72)
69L (14-72)

SIMILAR TO
CORONET BOLD

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31U (19-96)

SIMILAR TO
FACADE

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39U (15-76)

SIMILAR TO
STENCIL

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thickening or spreading. This explains why the photolithographic process (whether offset or not) is capable of printing fine screen halftones on coarse, low grade stock while yet holding most of the delicate gradations of tone.

The offset operator will find that many of his most puzzling problems will be solved and that the quality of his work will improve, if he keeps the foregoing in mind.

The symptoms are similar for most offset problems: either a fading image, veiled whites, or an over-all fog.

Assuming that the ink being used is a good grade of lithographic ink, and that the etch is a standard formula recommended by the plate or ink maker, both of these can be eliminated as probable causes right from the start.

These symptoms are most frequently caused by improper balance between the ink and the etch. It can be that there is too much of one, or too little of the other. Ideally, the plate should carry enough ink to yield good, strong solids, and enough water to keep the ink out of the non-image areas.

This is not so easy in practice, because the correct balance will vary with each change of stock. Some stocks literally soak up the water, with the result that if not adjusted for, the plate will run dry, whites will become veiled, and the image will tend to fill in. The problem here is not too much ink, but too little water.

At the other extreme are those stocks, usually coated, which accept ink willingly but water only sparingly. Since the water is not being carried off fast enough by the stock, it begins to back up onto the plate, causing the image to fade.

Neither of these conditions is caused by emulsification, although emulsification may later take place.

Emulsification, as used here, may be regarded as a suspension either of ink in water (the "milk" type) or of water in ink (the "butter" type). The former occurs less readily, and no emulsion occurs spontaneously. There must be either an emulsifying agent or a mechanical means to bring about the dispersion of the one in the other.

Emulsification takes place rather slowly and gives ample warning. It is most often heralded by a slight fading of the image. Increasing the ink will not remedy this. What is happening is that the moisture on the plate is being homogenized by the pressure of the ink rollers, and these must be adjusted.

An analogous condition develops when the molleton rollers exert too much pressure on the plate. In this instance, globules of ink are being emulsified with the water and veiled whites result.

Sometimes both the image and non-image areas are affected with a general fogging. This can be caused by too much pressure (friction) between the plate and offset cylinders. More often, though, it is due to the fact that an emulsion once formed retains many of the characteristics of both the ink and the water, and so has an affinity for both surfaces besides acting as an emulsifying agent.

Given a properly adjusted press, with matching ink and etch, most of these symptoms will not occur. When they do appear, they can then be traced to the water balance, and this in turn, to the nature of the stock upon which the ink and etch are being printed.